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REMARKS

Applicants request a copy of Form 1449 indicating the Examiner's consideration of listed references. Form 1449 was submitted with an Information Disclosure Statement on the filing date of the application.

Applicants thank the Examiner for the courtesy of a telephone interview on April 14, 2004. The Examiner and Applicants' representative, William Guerin, discussed the Office Action with respect to the rejections under 35 U.S.C. 102(b) and 35 U.S.C. 103(a).

The Office Action objects to the drawings under 37 C.F.R. 1.83(a) for failure to show every feature of the invention recited in the claims. In particular, the Office Action states that the permanent magnet rotor must be shown or canceled from the claims. Applicants include herewith a replacement sheet for amended FIG. 2 showing the addition of a permanent magnet rotor as recited in claim 11. Applicants have amended the specification to reference the addition of the permanent magnet rotor to the drawing; no new matter has been added. Applicants respectfully submit that the objection to the drawings is overcome.

Claims 1-11 were presented for examination. The Office Action rejects claims 1-11. This paper amends the claims 1, 3, 5, 8 and 11 to more clearly claim the structure of the stator coils as described, for example, by the figures (FIG. 2 to FIG. 9). Claims 1-11 remain pending in the application.

Rejection of Claims 1-4 and 11 under 35 U.S.C. § 102

The Office Action rejects claims 1-4 and 11 under 35 U.S.C. 102(b) as being anticipated by Kessinger, Jr. et al. (U.S. Patent No. 5,744,896, hereinafter "Kessinger"). Applicants respectfully traverse the rejection to the extent it is maintained against the claims as amended. Applicants teach stator coil groups adapted for radial gap electromotive machines. The stator coils nest together to form a stator having a high conductor density without increasing the volume of the generator or motor. Applicants' invention, as now set

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forth in amended independent claims 1 and 11, recites that each longitudinal section of each coil has a width forming a portion of a cylindrical surface and that the longitudinal sections and circumferential sections of each coil define a substantially rectangular opening.

Kessinger teaches coils for use in motors and generator using coils in an axial gap motors and generators. Each coil interlocks with adjacent coils to form a coil platter or disc of coils (i.e., a coil array lying in a single plane) as shown, for example, in FIG. 5 and FIG. 6. Unlike Applicants' invention, Kessinger discloses coils having a trapezoidal shape and flat longitudinal sections that lie in a plane. Kessinger does not teach or suggest longitudinal sections having a width forming a portion of a cylindrical surface. Kessinger also does not teach or suggest coils configured to define a rectangular opening. Moreover, one of ordinary skill would not be motivated to provide a curve (i.e., portion of a cylindrical surface) to the longitudinal sections disclosed in Kessinger because the result would be an increase in the thickness of the axial gap motor or generator. Furthermore, one would not be motivated to use coils with a rectangular opening because such coils would not conform to the circular arrangement of coils in the axial gap machine disclosed in Kessinger. Thus Kessinger fails to disclose or suggest every claimed limitation of the Applicants' invention as now set forth in independent claims 1 and 11 and, therefore, Applicants respectfully submit that the rejection is overcome. Claims 2-4 depend directly or indirectly from patentable independent claim 1, and incorporate all of its limitations, and therefore are also patentably distinguishable over the cited reference for at least those reasons provided in connection with claim 1. Therefore, the Applicants respectfully submit that the rejection against these claims is also overcome.

Rejection of Claims 5-9 under 35 U.S.C. § 103

The Office Action rejects claims 5-9 under 35 U.S.C. 103(a) as being unpatentable over Kessinger in view of Takahashi et al. (U.S. Patent No. 4,551,645, hereinafter "Takahashi"). Takahashi teaches a disc type motor having "plate-like" (i.e., flat) coil segments. Applicants respectfully traverse the rejection because neither Kessinger nor Takahashi discloses coils having longitudinal sections with widths forming a portion of a

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cylindrical surface forth in claim 5 and dependent claims 6-10. The arguments presented with respect to claims 1 and 11 are reiterated here with full force and effect. Consequently, the Applicants respectfully request that the rejection be withdrawn.

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CONCLUSION


In view of the arguments made herein, Applicants submit that the application is in condition for allowance and request early favorable action by the Examiner.

If the Examiner believes that a telephone conversation with the Applicants' representative would expedite allowance of this application, the Examiner is cordially invited to call the undersigned at (508) 303-2003.

Respectfully submitted,

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